



# **HAMMER/Hanford Training Site**



## **Report from the DOE Voluntary Protection Program Onsite Review, August 27-28, 2002**



**U.S. Department of Energy**  
Office of Environment, Safety and Health  
Office of Safety and Health  
Office of Regulatory Liaison  
Washington, D.C. 20585

**September 2002**



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# Abbreviations and Acronyms

<b>AJHA</b>	Automated Job Hazard Analysis
<b>ANSI</b>	American National Standards Institute
<b>BLS</b>	Bureau of Labor Statistics
<b>CHP</b>	Certified Health Physicist
<b>CIH</b>	Certified Industrial Hygienist
<b>CSP</b>	Certified Safety Professional
<b>DOE</b>	U.S. Department of Energy
<b>EJTA</b>	Employee Job Task Analysis
<b>EMT</b>	Emergency Medical Technician
<b>EP</b>	Emergency Preparedness
<b>ES&amp;H</b>	Environmental, Safety and Health
<b>FH</b>	Fluor Hanford
<b>HAMMER</b>	Hazardous Materials Management and Emergency Response
<b>HAMTC</b>	Hanford Atomic Metal Trades Council
<b>HAZWOPER</b>	Hazardous Waste Operation and Emergency Response
<b>HEHF</b>	Hanford Environmental Health Foundation
<b>HFD</b>	Hanford Fire Department
<b>HGET</b>	Hanford General Employee Training
<b>HSO</b>	Hanford Site Operations
<b>ISMS</b>	Integrated Safety Management System
<b>JHA</b>	Job Hazard Analysis
<b>JSA</b>	Job Safety Analysis
<b>MSDS</b>	Material Safety Data Sheets
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PE</b>	Professional Engineer
<b>PM</b>	Preventive Maintenance
<b>PPE</b>	Personal Protective Equipment
<b>VPP</b>	Voluntary Protection Program
<b>ZAC</b>	Zero Accident Council





## Executive Summary

The DOE-VPP onsite review of the HAMMER/Hanford Training Site was conducted from August 27-28, 2002 in Richland, Washington. Fluor Hanford (FH) has operated the Hammer training Site for the Department of Energy (DOE) and its predecessors since 2001. The following summarizes the review teams observations and analysis.

### Management Leadership

The DOE-VPP Onsite Review Team (Team) found strong evidence of safety and health (S&H) commitment from all levels of management. Management and employees have successfully established a relationship of mutual respect and cooperation on all matters relating to safety program implementation. The Team noted that management demonstrated a very strong commitment to employee S&H and they held themselves both responsible and accountable for S&H in the workplace. All managers, supervisors and employees are evaluated as to their performance in the safety and health area. Top-level management is visible and actively participates in the S&H program.

### Employee Involvement

The Team found that employees are actively involved in S&H in the workplace. Employee involvement not only occurs through their participation in the safety meetings and training activities, but also through the safety inspection processes, the worker observation program, and in periodic self-assessments. Employees openly stated that they not only felt responsible for their own safety, but also for their peers' safety. The Team found during the interviews that employees usually spoke in terms "our" efforts when referring to their peers and management. This clearly demonstrates a strong sense of ownership and pride in S&H by the employees. The Team observed that employees are truly involved in the S&H program and a strong safety "culture" has developed at this site. Notably, employees are not only involved in hazard recognition, job hazard analyses, but also in hazard resolution.

### Worksite Analyses

Various forms of self-inspections are conducted at this site. Job hazard analyses (JHA) are thorough and extensively utilized. Employees are not only encouraged to report any unsafe conditions, but are expected to report and correct the situation(s), if safe to do so. Accident investigation processes involve employees and result in an analysis to determine the root cause. Identified hazards are immediately addressed with appropriate corrective actions are being taken in a timely manner. The site has established several

integrated hazard analysis and work planning tools. FH HAMMER/Training also conducts numerous inspections of all units and areas.

### **Hazard Prevention and Control**

HAMMER (Hazardous Materials Management and Emergency Response) has a full complement of safety and health professional staff available from the Fluor Hanford and the Hanford Site resources. Safety and health rules have been clearly laid out for all employees and managers. The site employs a standard hierarchy of control to the prevention and mitigation of hazards in the work environment consisting of engineering controls, administrative controls, and personal protective equipment (PPE). The PPE program is an in-depth program that is well integrated into the operations control, safety and health oversight, and training portions of the site's programs. FH HAMMER/Training has implemented a comprehensive preventive maintenance (PM) program that uses a combination of preventive, predictive, and corrective maintenance to enhance the availability, operability, and reliability of plant structures, systems and components. The site has mature, well functioning emergency preparedness, radiation protection and medical programs.

### **Safety and Health Training**

The Team noted from employee interviews and document reviews that employees at all levels knew how to identify and protect themselves and others from hazards associated with their jobs. As was noted on several occasions during the interviews, the training provided to employees has made them more conscious of health and safety issues not only in their work environment, but also in their everyday lives away from the site.

Management clearly supports the S&H training programs as evidenced by employee interviews, funding levels, documentation review, accreditation, and nationally recognized awards. In addition, interviews with personnel, who conduct safety and health inspections and self-assessments, confirm that they provided in-depth hazard recognition training.

### **Conclusion**

The Team concludes that the applicant has met and/or exceeded each of the five DOE-VPP tenets. Accordingly, our technical opinion as documented in this report will be presented to the DOE-VPP Program Administrator for consideration.

# I. Introduction

The DOE-VPP onsite review of the FH HAMMER/Training was conducted from August 27-28, 2002 in Richland, Washington. Fluor Hanford has operated FH Hammer/Training for the Department of Energy (DOE) since 2001. This application encompasses all work conducted by FH HAMMER/ Training regardless of the sponsoring and supporting organization at the Hanford Site. Availability of electronic references in the application provided an abundance of records and information. The electronic links within the application provided easy access to information. The application was approved on August 30, 2002. FH HAMMER/Training's core mission is to provide training services for the DOE.

FH HAMMER/Training was evaluated against the program requirements of the U.S. Department of Energy Voluntary Protection Program (DOE-VPP). The Onsite DOE-VPP Evaluation Team consisted of individuals from the DOE Headquarters office and the Richland Operations Office. {See Appendix for a roster of the DOE Onsite Review Team. During the review, the Onsite Evaluation conducted formal and informal interviews, and reviewed limited documentation.}



## II. Program Status

A review of the Occupational Safety and Health Administration (OSHA) 200 logs was made. The rates below include subcontractor and instructor hours and injuries:

<b>INJURY AND ILLNESS RATES FOR HAMMER/Hanford Training</b>					
Calendar Year	Lost Workday Cases	Total Recordable Cases	Employee Hours	Lost Workday Case Incident Rate	Total Recordable Case Incident Rate
1999	0	1	158,324	0.00	1.26
2000	1	1	195,691	1.02	1.02
2001	0	1	108,843	0.00	1.84
3-Year Average	.33	1	462,858	0.43	1.3
Bureau of Labor Statistics (BLS) average for SIC 82 Educational Services – 2000				0.8	3.2
HAMMER/Hanford Training percent below BLS rate				46%	59%

The information on the OSHA 200 logs support the information provided in the application and the organization's first report of injury forms supports the data in the logs.

A health and safety professional is responsible for the entries to the OSHA 200 log and verifies the accuracy of the records. The person understands the recordkeeping requirements including the changes that went into force in January 2002.

The organization requires all sub-contractors to maintain logs. All training is provided by contracted instructors at the center. Trending and analysis is conducted by Fluor with the assistance of specialized data bases maintained by the company.



### III. Management Leadership

The level of management commitment found at this site meets all DOE-VPP criteria. The sub-elements of this tenet and an evaluation of the applicant's performance in these areas are addressed and described below.

#### A. VPP Commitment

Management support and commitment are critical to the successful implementation of the DOE-VPP. FH HAMMER/Training management has implemented a number of well-integrated safety management systems drawing on the guidance and support of its parent, Fluor Hanford. These systems work together to ensure that all work is managed, and all recognized potentially hazardous situations are identified and mitigated. This level of commitment is reflected in continuous immediate accessibility of all managers to the principle work areas of the site. The employees, almost without exception, indicated that they were able to communicate both formally and informally with all of their managers at any time for any safety issue and gain immediate action for their concerns. Likewise, most safety issues are resolved at the lowest working level as they arise with an understood full management endorsement. Worker empowerment for both work process and for safety is the hallmark of management at FH HAMMER/Training.

FH HAMMER/Training and Fluor policy state that "they are committed to providing a safe and healthy working environment for all staff; protecting the general public, and the environment from unacceptable environmental, safety and health risks; and operating in a manner that protects and restores the environment. Anything that poses a safety and health risk is unacceptable. During the review, employees indicated they were aware of this position.

FH HAMMER/Training managers at every level are involved and showing their commitment to worker safety by helping to identify the worksite hazards and reduce the danger of injury and illness to employees.

Management's involvement, participation, and visibility in safety are evidenced by their endorsement of managers and worker's participation workplace safety activities. These activities include participation in safety councils, critiques of training events, work planning and post training critiques. Each training event is in one degree tailored to a specific training requirement, and therefore, the managers' work with employees as needed to assure that adequate safety is established for each of these frequently unique activities, for both staff and the trainees. These managers ensure that safety is recognized as an integral part of this training exercise in the eyes of all training event participants.

All employees and management have performance criteria that include safety performance as a key element of their yearly evaluation. All employees at FH

HAMMER/Training may report a safety related concern or issue without fear of reprisal or harassment and their intent is commonly, to achieve immediate adjustments in coworker behavior, and not as an academic or administrative issue.

## **B. Leadership**

The application presents a well thought out comprehensive program to support all the sub-elements of this VPP tenet. Management commitment to safety and employee involvement is implicit in the design of the program and systems that support safety at the site.

The Director and managers solidly demonstrate management commitment. FH HAMMER/Training's and Fluor's commitment is demonstrated in strong safety and health policy statements, the providing of resources necessary to support all safety and health program activities, attention to employee identified safety and health concerns, active participation in safety promotional activities, and leadership/mentoring for employee safety team activities.

FH HAMMER/Training has established a hierarchy of committees and teams that appear to effectively provide an opportunity for all employees to be involved in the safety program. Starting with the VPP coordinating committee, and working down through several process and discipline specific committees, workers and managers cooperate to plan and administer the safety process.

## **C. Organization**

FH HAMMER/Training is organized to support its roles and responsibilities policies. Through review and observation of the processes in action, the review Team believes that safety is integrated into FH HAMMER/Training's organizational design. They are organized into training divisions (each with a specific teaching area) and various support organizations that provide expert assistance from various parts of the Hanford Site. The small ES&H staff reports to the Director and provides expert ES&H services. As with most of the personnel at the Hanford Site (including the other site facilities, such as Safety and Health Department and the Radiological Control Group) are assigned as needed to support specific line requirements. The Hanford Site is organized for optimal mutual support among facilities, and FH HAMMER/Training both serves and is served by this site integration.

## **D. Responsibility**

Top management both at Fluor Handord and at FH HAMMER/Training are prominently involved in all elements the S&H program, and they are committed to the implementation of a well-coordinated S&H program, including establishing a clear line of communication



with employees. FH HAMMER/Training subscribes to the philosophy that line management is responsible for safety. However, it is clear that management needs help with implementing the Environment, Safety and Health (ES&H) Program, that each employee takes personally responsible and ownership for safety and has a significant role to play in implementing this program.

FH HAMMER/Training has clearly defined the roles, responsibilities, accountabilities, and authorities for conducting business. Managers and employees have been clearly made responsible for safety at FH HAMMER/Training. Policy acknowledges that at the Hanford Site there is a team of ES&H specialists with technical expertise, including a variety of disciplines such as industrial hygiene, fire protection, and radiation protection that are available to achieve excellent performance. For that reason, highly qualified ES&H professionals can be part of the operating teams that ensure that work is performed safely, and these other site-based ES&H professionals provide an independent overview of FH HAMMER/

### **E. Training Safety Operations**

Hammer uses position descriptions to ensure that all positions in their organizations have a current and accurate description of the duties of the job to be performed and the reporting relationship. Employee performance review is used to monitor and reinforce implementation and performance goals for safety.

Hammer has established a strong safety culture; that both management and employees share a belief that all employees are both responsible and accountable for safety and health in the workplace.

### **F. Accountability**

Management is committed to providing the leadership, direction, goals, training, resources, and standards to assist employees in the performance of their duties in a safe and healthful manner. Management and employees share in the responsibility to carry out individual duties in a safe manner. Managers are held accountable for safety by specific standards within their individual performance standards and they are accountable for the consistent enforcement of company safety policy. It has a formal written performance appraisal system with safety and health responsibilities as a critical element for management.

The annual performance reviews are a key method used by the site to hold all employees, including managers and supervisors, accountable for their performance. The annual performance reviews, which are conducted for all employees, consider safety and health performance as a major element of the review. Employees have input to what their specific safety and health expectations are for the rating period. Additionally, the results of these reviews directly affect annual merit pay considerations. Management has an established policy allowing disciplinary action(s) for violations of rules, policy and

requirements, thereby ensuring accountability on the job. Accountability is regularly communicated to all employees through staff meetings, safety meetings, training, site publications and annual performance reviews. All subcontractors are expected to follow these safety and health requirements, and they are held accountable for meeting these requirements, both through formal contractual agreements, and through the implementation of formal policies, procedures, and directions. Failure to comply with these requirements and/or continued non-compliance can result in dismissal from the work site.

## **G. Authority and Resources**

All employees are responsible for safety. All site employees are empowered by management with the authority to address and to correct safety concerns. This review indicated that the system utilized is effectively working. The Director has the ultimate responsibility with the assistance of full-time professional, technical and administrative employees, and the various safety teams. Adequate resources, including staff, equipment, materials, training and professional expertise have been committed to workplace safety and health.

FH HAMMER/Training changed their management system in 2001 to a safety & health related Integrated Safety Management System (ISMS). This in-turn, changed many aspects of safety and health projects, investments, training, and funding processes. This system of standards based management places emphasis on safety and health, work site analysis, hazard identification and prevention/control, and management and staff related assessments.

The ability to invoke the use of “stop work authority” has been clearly communicated to the entire staff, along with the understanding that any perceived repercussions will not be tolerated. Likewise management maintains an “Open Door” policy that rarely is used because managers are typically both very available and highly responsive to individual employee safety conversations.

Corrective actions on safety findings, issues, and other items, while typically very few, are corrected quickly and tracked until completion. This included two VPP team review items. The previous budgets have been adequate, as budgets are not specifically identified for safety. Funds are allocated as needed from a common budget. Hence, there is no sense of competition for safety funding.

## **H. Planning**

The need to build S&H into projects is well ingrained in FH HAMMER/Training culture and policy. The annual planning process requires managers to analyze and predict employee training, ES&H, and operational costs for doing business. An institutional safety plan helps capture long-term goals and capital expenditures. An integrated

planning framework has been established to provide a comprehensive template to ensure the planning process is comprehensive. The work process at HAMMER integrates S&H into the work life cycle.

The inclusion of safety and health planning by management begins at the operating level. The first guiding principle in the site's long-range Safety Plan, which governs the site's mission and vision, is "safety and health excellence." At higher levels, managers are required to plan and outline safety and health support as part of their scope of work. Overall, the application indicates that the safety and health program is goal driven with annual review and modification of goals and objectives based on actual performance. Safety and health planning is extremely thorough, and it is designed to ensure continuous improvement.

## **I. Subcontractor Program**

Contract workers are expected to meet the same standards for safety as FH HAMMER/Training staff. Contractors or their workers who do not meet those standards may be barred from performing work. No recent examples could be found, however.

FH HAMMER/Training staff oversees its contractors at every stage. Failure to comply with safety and health rules, regulations, and policy can result in dismissal from the site. Subcontractors who repeatedly violate the same rules, policies or standards may be dismissed from the site and prohibited from future work.

All Subcontracted work employees must receive the primary site orientation through Hanford General Employee Training (HGET); activity and workplace specific orientation and training is received through a mix of both

Hanford site-sponsored courses and locally sponsored courses. Contract provisions require audits by FH HAMMER/Training. This system has been effective for several years.

The management personnel interviewed during the course of this onsite evaluation who had a responsibility for either planning, supervising, or working along with subcontractors indicated that subcontractors were all expected to follow S&H requirements, and that subcontractors were held accountable for meeting these requirements. In addition, a few random interviews with subcontractor employees confirmed that subcontractors and their employees were held accountable for S&H performance on the job. These subcontractor employees all appeared to be knowledgeable in the site's safety requirements and actively participated in the site's VPP activities.

## **J. Program Evaluation**

Annual program evaluations have been conducted using VPP criteria since 2001. Evaluations of the S&H program are conducted with participation by both management and employees. Self-assessments and annual reviews are used as a means for continuous improvements in the S&H program.

The results of annual program evaluations and other S&H trending data are used by FH HAMMER/Training to develop goals and objectives for the coming year. Employees conduct the annual evaluations, and the results are formally documented. Every corrective action is then tracked to completion. Yearly goals and objectives for the S&H program and the individual units are developed and partially based on the results/findings of the annual program evaluations.

The last annual VPP program review was completed in January of 2002. The report was well documented, identified areas needing improvement, and included detailed corrective actions and goals to ensure the VPP effort and overall program is continuously improved at this site.

## **K. Site Orientation**

A comprehensive, formal site orientation program including training and documentation applies to all persons entering this site. The Hammer training programs are available on entry to the site. Each individual is responsible for completing their assigned training before being granted access to FH HAMMER/Training. For each visitor, a staff member serving as host assumes responsibility to ensure that all appropriate orientation and training are completed.

## **L. Employee Notification**

The employee notification program surpasses the requirements for employee notifications contained in DOE Orders and guidance documents, and these requirements exceed the OSHA (Federal and State) requirements for employee notification. FH HAMMER/Training employs a number of communication mechanisms designed to appeal to the diverse population. Each employee is initially provided an employee training handbook that includes the necessary information for employee safety notification. Items in this handbook include points of contact; the Safety Improvement Plan; membership of the Zero Accident Council (ZAC), and its charter; HAMTC roles and responsibilities; policies, addresses and other useful information. In addition, VPP and general safety information brochures and postings have been developed. Several awards campaigns have also been exercised to foster safety program ownership.

The Director and other manager have clearly accepted responsibility for the safety of their employees and the operations under their control by establishing ES&H policies.

The management of the facility is fully committed to achieving a safe and accident-free work environment.

### **M. Management Visibility**

Top-level management is clearly visible, and actively participates in S&H program. FH HAMMER/Training management regularly participates in various S&H activities. Managers are held accountable for their S&H responsibilities, and maintain a policy of accessibility with regard to S&H issues that arise in the workplace. An “open door” policy ensures that any employee at any time can express safety concern to any level of management. The team confirmed this policy through formal and informal interviews, and noted that most employees did not feel the need to raise concerns above their first-tier or immediate supervisor, because any concerns raised were resolved almost immediately. Also, all employees do an outstanding job of addressing any safety concerns and facilitating corrective action(s) where needed. Accordingly, employees did not believe it necessary to take concerns to upper level management, as issues were handled effectively by the various safety committees and first line supervision.

### **N. Conclusion**

Management leadership is clearly demonstrated by the S&H infrastructure in place and functioning at this site. Skillful attention to the encouragement and growth of employee ownership has enhanced not only the S&H program, but has measurably improved all operational areas. FH HAMMER/Training meets all requirements for the management commitment.



## IV. Employee Involvement

The onsite review clearly showed that employees are actively engaged in the S&H program. In addition, review of program documents and the results of interviews showed that management has empowered employees to proactively administer the S&H program at this site. Partnership between management and employees to provide a safe workplace is evident at all levels. The degree of employee involvement in safety and health found during the review clearly meets all DOE-VPP criteria for employee involvement.

### A. Degree and Manner of Involvement

The information gathered for this portion of the report relies heavily on observations of employees in the workplace while conducting their routine duties, and on both formal and informal interviews of employees. Employees feel they own the safety culture. Notably, the Operations manager demonstrates a well-used open door policy and team approach to safety. Employees at all levels feel comfortable to raise concerns and participate in their resolution. Employees throughout the site feel no barriers to communication and there are no boundaries between exempt, non-exempt, management and bargaining employees.

The HAMMER/Hanford Training employees continually referred to this as “the safest place I ever worked,” and reported they were able to correct safety items most often at the lowest level. Formal employee interviews at this site were conducted by selecting employees from a list that was provided by Hammer. Additionally, random interviews were obtained by selecting employees during the walk-through of work areas at the various site locations.

Workers were candid and showed no fear in talking with the VPP review Team during interviews. All employees indicated that they understood their rights and responsibilities, and are very knowledgeable about their rights and responsibility regarding safety and health. Interviews confirmed that a strong safety culture exists at all levels, and employees feel empowered to voice safety concerns.

Most employees were familiar with Hammer’s efforts to continually improve safety programs. They understood that the pursuit of VPP recognition was part of HAMMER/Hanford Trainings continuing efforts to keep the VPP moving forward and also sustain ISMS principals. The employees understand and appreciate management’s intent to improve safety. Almost all employees interviewed were very knowledgeable regarding their rights to request reports of inspections; accident investigation; and injury and illness records. All stated that they were given timely and complete written and/or oral feedback to safety and health questions and issues.

Overall, it was clear that the work force has enthusiastically welcomed the opportunity for increased participation. When asked how the VPP process has impacted their work,

most employees interviewed responded that their awareness level has increased; they are analyzing the effectiveness of their present safety systems and recognize how their work may impact the safety of others. Employees indicated that the Company's VPP efforts have kept safety in the forefront. Many workers indicated that the VPP effort has moved the HAMMER/Hanford Training safety programs to a higher level.

## **B. Safety and Health Committees**

Employees are knowledgeable about the VPP effort at this site through several committees including:

- Labor/Management meetings VPP Steering Committee
- VPP Champs
- HAMMER/Hanford Training ZAC
- Hanford Site Operations ZAC
- Presidents Zero Accident Council
- Hanford Health and Safety Exposition Committee

Hammer has also spread the word through emails; All Employee safety meeting; Hanford Training Center monthly meeting, and the employee newsletter; the NAIL; and playing the VPP Outburst game. Management participates in the committees, but the employees have the ownership. The Nail is an informative way to communicate to the staff about safety and ways that they are involved in VPP.

There are numerous safety-related committees, task teams and activities focused on safety and associated with ISMS. Most employees remarked that ample opportunities exist for involvement in all aspects of the safety and health program.

Committee meetings are held on a monthly basis, and minutes are kept and posted for review by all employees. Employees are very knowledgeable and confident in the committees and program processes.

Most workers indicated that they have input into their work procedures. Many of them are involved in the development process and others have input after the development, or at anytime they feel a change is needed, and always prior to implementation and use. Employees were very confident and enthusiastic and feel they are part of the work development process at this site. Hammer/Hanford Training incorporates more employee involvement in the development of new training, coordinating with other craft, and also in the actual writing of the lesson plan.

Employees are involved in the reporting (formally and informally) of hazards. They have stop work authority and they feel comfortable and confident with it. They have input into systems and procedures for incentive programs as well as the disciplinary procedures as they relate to safety and health issues. Hammer/Hanford Training and Hanford Atomic Metal Trades Council (HAMTC) has assigned a Bargaining unit Safety Representative



who is responsible for assisting bargaining unit staff members with resolving their safety related concerns, or any staff concern related to ES&H issues. It is up to the manager to ensure that the employee is familiar and understands the disciplinary procedures as they relate to S&H issues; in the interviews conducted, all employees were knowledgeable about these procedures.

### **C. Notable Programs/Processes**

#### Safety Log Book

HAMMER/Hanford Training has worked hard to find the best way for their employees to report, correct and track safety concerns. The logbook system with a single point of contact is well known in the facility and viewed as an easy way to get things done. Employees are proud that most items are fixed on the spot or within 15 minutes and do not require formal reporting.

#### Monthly Safety Walkthroughs

Employees and Management perform safety walkthroughs of the HAMMER/Hanford Training facilities together on a monthly basis. Participation is rotated through all the staff to provide a new set of eyes and give everyone an opportunity to participate. Many items are fixed immediately and others are tracked to closure. Employees are involved in reporting (formal and informal) of hazards, they have stop work authority, and they have input into systems and procedures for incentive programs as well as the disciplinary procedures as they relate to safety and health issues.

### **D. Conclusion**

Employee ownership has taken root in many forms throughout this worksite, and it appears that it can be sustained by the infrastructure put in place by management and desire of the employees to make safety their first priority. Employees are proud of their worksite and feel safety is integral to maintaining a world-class training organization. Hammer meets all requirements for the employee involvement tenet.



## V. Worksite Analysis

The onsite review clearly showed that HAMMER meets or exceeds the requirements for worksite analysis found in the DOE-VPP criteria. The sub-elements of Worksite Analysis program at this site are described below.

The worksite analysis processes across HAMMER are structured and implemented to adequately control hazards to the workers, the environment, and the public. Formal worksite analysis processes for control of operations and the mitigation of hazards or potential hazards are in place. Personnel interviewed during this review and observations made by the Team confirmed that these processes are used and understood by the HAMMER staff, Instructors and students. Hazard analysis processes incorporate such tools as AJHA system, Job Safety Analyses (JSA), and require walkthroughs by planners, crafts, engineers, instructors, and subject matter experts to ensure a safe and functional work evolution is structured prior to work commencing and teaching.

### A. Pre-use/Pre-startup Analysis

Pre-use/Pre-startup hazard reviews are an integral part of the S&H process at this site. All new or revised facilities, operations, and processes at HAMMER are reviewed and analyzed to identify and mitigate potential hazards before work is started by the responsible Manager. Proposed designs and modifications are subjected to safety analyses. S&H professionals review requisitions for equipment and material to identify potential hazards before they are approved. Proposed laboratory experiments undergo hazard analysis before being conducted. The ISMS provides detailed comprehensive ES&H requirements for planning, analysis and control of hazards

HAMMER uses a formal work control procedure known as established by Fluor Hanford and Hanford Services Organization (HSO). Work in HAMMER is typically performed under the HSO who establishes an operating envelope based on the hazards associated with a space and the controls in place for each hazard.

Major purchases of goods and services that require a contract are executed in accordance with the ISMS subject area, Purchasing Goods and Services. S&H issues are identified and addressed through purchasing constraints and contract provisions. Appropriate contract provisions are assured through the involvement of trained specialists.

New and modified equipment must meet HAMMER requirements for safety (e.g., guarding, electrical safety, etc.). Consensus and regulatory standards (such as the American National Standards Institute (ANSI), National Electrical Code, etc.) are specified where appropriate. Although many items can be purchased without ES&H review, there is a list of items where purchase is prohibited without prior approval. Complex or safety-significant systems require a level of readiness review and/or

acceptance testing specified by the Cognizant. Example: “Before beginning the work, operations manager and operations team members ensure that the risks and hazards are controlled (with permits, procedures, training, etc.) as specified in the approved work plans. (The determination that the risk and hazard controls are in place is accomplished using the individual project team members’ processes and procedures.)” ISMS provides guidance regarding the criteria that various types of equipment must meet, thresholds where overview or additional approval is required, and processes to be followed to ensure that procured equipment is properly analyzed and hazards adequately mitigated.

## **B. Comprehensive Surveys**

Comprehensive facility, safety and health assessments were conducted in 2001 in response to requirements in DOE Orders. The documentation now serves as a valuable resource for S & H staff performing hazard assessments and analyzing potential hazards while planning work. The current HAMMER mechanism for documenting identified fixed hazards in workspaces is the by written listing, signing, and evaluation of the system. Checklists are employed to help guide staff and managers, ultimately responsible for the S&H conditions in the assigned space, in identifying hazards and prescribing controls. Qualified S&H professionals are available for assistance and conduct inspections of each process, task, props, or project. These hazard identification methods are complemented by programmatic and frequent facility-specific self-assessments.

The industrial hygiene staff reported no operations require recurring exposure monitoring for airborne contaminants. The employee involved was protected by appropriate PPE and the hazard was ultimately eliminated.

Each S&H professional performs self-assessments of the development and implementation of their system elements on a periodic cycle (e.g., every 2 to 5 years). Some self-assessments are required by law or policy to be conducted more often: annually (Respiratory Protection, Confined Spaces, Lock N’ Tag, etc.). The self-assessments of the Worker, Safety and Health and the facility include assessing related subject areas and program descriptions. Line managers are responsible for the identification of potential hazards. Those individuals have experience and qualifications related to the work, and are typically able to identify and evaluate the hazards. Qualified Safety and Health professionals drawn both at HAMMER and at the Hanford Site are available to assist line managers, staff, instructors, or workers with the identification and evaluation of hazards.

## **C. Self-Assessments**

Self-Assessments are used in all aspects of operations, and results are available to all employees to identify areas of concern and those needing improvement. Results are documented and tracked to ensure resolution. The assessments process is well defined in the ISMS. Results from the assessment are analyzed to produce information useful to

improve performance and prevent recurrence of negative issues. To be effective, the information must be communicated to the manager responsible. Using his or her best judgment, the responsible manager must report significant findings to HAMMER management. As S&H issues are discovered, they are documented and tracked to ensure resolution.

Regulatory driven self-assessments included the regulatory driven annual reviews of safety programs (respiratory protection program, confined spaces, etc) and other targeted areas for evaluation developed from formal and informal feedback mechanisms. The last respiratory protection program and the last ergonomic program self-assessment included Findings and Observations that were indicative of a robust, self-critical approach and process. All identified findings from the self-assessments are entered into the tracking system.

HAMMER considers their self-assessment program very strong to assure quality of their overall ES&H program. The program meets or exceeds the requirements of DOE O 420.1 and DOE P 450.5.

#### **D. Routine Hazard Analysis**

All work and props are planned and analyzed before activities begin, as described in the Flour Hanford Pre-Use/Pre-Startup Analysis document. For maintenance work, activities are evaluated by an assigned staff member, which can include a operations manager, work planners, and subject matter experts from the Hanford Site who determine whether the work requires formal planning or may be performed by skill of the craft. Lastly, all organizations perform routine self-assessments to identify and mitigate hazards that may not have been adequately addressed by work preplanning.

Hazards and routine controls are communicated by means of the JSA. The JSA is one of the main tools used by the site to document hazard evaluations. When routine tasks are performed, provided the safety conditions have not changed since the JSA was approved, the JSA can replace the need to complete another hazard evaluation. This allows routine activities such as routine maintenance to proceed without additional hazard analysis.

Additionally, JSAs for “high hazard” activities and props are reviewed annually and updated as appropriate. All other JSAs are reviewed, unless a tasks/job changes in which case they are reviewed and updated at that time. JSAs are significant part of the work control process. They are used to train employees in pre-job briefings, and then utilize them from the initial walk down of a task through to the post-job briefing.

In addition to these work control procedures, it was noted that pre-job briefings and post-job reviews are required of all props, operations, maintenance, and construction activities. Besides ensuring that employees are aware of potential hazards before beginning work and students are made aware before the training starts, this process also ensures that

pertinent information is captured after the task is completed and used to improve safety and training quality.

This entire process is well integrated with the other aspects of the program. All employees are trained in these procedures. Also, the Lessons Learned group reviews and collects operational experience information, prioritizes it by a risk-ranking method and places it on a site-wide database for use by trainers, managers, and others.

## **E. Employee Reporting of Hazards**

Employees are encouraged and expected to identify, without fear of reprisal, conditions that compromise or are not in compliance with company S&H programs. The concerns procedure describes the formal process that staff members may use to raise concerns and obtain management resolution of those concerns. Formal concerns that are submitted to the HAMMER Director's Office are managed according to an internal policy. That policy calls for the employee to be contacted within 48 hours to further identify issues and discuss a path forward for resolution of the concern. Additionally, facility-related safety concerns are reported to the manager and HAMMER Director either by phone or through the special telephone number. These calls are tracked and managed to completion. It is company policy that managers are required to respond to employee safety concerns and provide feedback to the initiator of any report involving a safety concern. Employees are encouraged to utilize this system, however they are not required to use it as their only means of hazard reporting. Verbal notification of a manager is specifically encouraged for those employees electing not to use the formal system. The manager in charge of the area where the hazard or potential hazard is located will then enter the appropriate information into the formal system for tracking through to resolution.

Every employee that was interviewed indicated they would not hesitate to report a hazard or stop work. All indicated there was NO FEAR of reprisal. Several examples were cited where hazards were cited.

## **F. Accident Investigations**

HAMMER with Fluor Hanford and HSO investigates all off-normal events and evaluates their causes. As a result, corrective actions for adverse events are incorporated into the Laboratory's improvement initiatives. Work-related injuries and illnesses, no matter how minor, are reported as described in the area; injury or illness S&H staff assist management with investigating and documenting staff injuries and illnesses. Those investigations are recorded.

Managers are responsible for accident investigations, and employees can participate either as part of the initial investigation and/or as a member of the safety team conducting required follow-up evaluation(s).

HAMMER conducts a number of types of reviews, based on DOE and Fluor Hanford requirements. Near-miss incidents are reported and investigated in accordance with the directives. Knowledgeable staff from the Hanford Site facilitates investigations of significant events and ensure that root causes are properly evaluated and addressed. The Occurrence Reporting process uses a rigorous root-cause analysis on a graded approach as part of the investigation process.

Critiques are also completed as soon as practicable after an event or situation is stabilized, or after a successful special effort is completed, preferably within 24 hours. Critiques are required for all radiological events, and are recommended and conducted for non-radiological events as well. All employees involved attend critiques in the event and by other employees and DOE personnel that have an interest.

## **G. Trend Analysis**

Safety and Health performance and trending data are available to both management and employees, and it is used as the basis to modify, change, or establish safety processes. The data is also used to establish the overall company and unit safety goals and objectives from which employees develop their own safety and health action plan. The analysis staff prepares and distributes data covering occupational safety, industrial hygiene, radiological control, environment, deficiency and corrective actions, and prevention programs. In addition, the Hanford Medical Foundation issues monthly injury and illness reports covering type, severity, and lost days involved in injuries and illnesses. Notably, employee safety teams also perform unit-specific trending of injury/illness experience; inspection/assessment results, reported concerns, and root cause investigation results.

The site's Environmental, Safety and Health Performance Analysis Report is routinely published and available on-line to management and to employee members of safety committees. Trends are conducted on the work injuries and illness, self-assessment findings and other items.

## **H. Conclusion**

The Team considers that FH HAMMER/training has achieved a satisfactory level of quality performance in worksite analysis. Management has adequately demonstrated a program of continuous improvement in the safety of all work places.





## **VI. Hazard Prevention and Control**

The level and complexity of the hazard prevention and control program found at this site meets DOE-VPP criteria. Sub-elements of this tenet are addressed and described below.

### **A. Access to Certified Professionals**

HAMMER has a fully staffed safety and health support within the Hanford Site. Professionals include Certified Safety Professionals (CSPs), Certified Industrial Hygienists (CIHs), Certified Health Physicists (CHPs), and Professional Engineer (PE) Fire Protection Engineers that are available to them within Fluor Hanford and Hanford Site Organization. Other staffs that are available have credentials in hazardous material management; training, transportation, and environmental compliance are also available to support the program. The site has ready access to these certified professionals for support of operations as needed. In addition, HAMMER has two onsite Health and Safety professionals. These professionals work closely with the organizations conducting operational work and tasks, and they are used in supervisory as well as in direct support staff positions at HAMMER. They are involved, along with employees, from beginning to end of projects, setting up props, inspections, and over viewing activities. Between the three organizations the HAMMER site also has numerous certified specialists that support operations as and when needed.

Communication from this extensive staff of technical experts to the employees is encouraged and supported by a number of processes and policies.

### **B. Methods of Prevention and Control**

Hazards at this site are controlled using engineering controls, PPE, and work practice guidelines. These controls are reviewed and only need updating on an infrequent basis, as they are well characterized. All site safety rules, safe work practices, and PPE usage was found to meet requirements. The site has undertaken a program requiring all hazardous materials to be evaluated for suitable non-hazardous replacements, and to be centrally received so that they can be controlled, and so that Material Safety Data Sheets (MSDS) can be entered into a central computerized database for site-wide access. Hard copies of MSDSs are also maintained in the appropriate areas of usage.

HAMMER has many training props that are used to training the students and some could be considered hazardous. When these props are in use the Instructor is fully trained by the HAMMER staff and is under the watchful eye of the assigned HAMMER staff member.

Subcontractors and employees work closely with HAMMER employees to anticipate work hazards, to reduce hazards and potential exposures, and provide precautionary protection to workers, staff and students in potentially hazardous situations/conditions. All confined spaces, overhead work, and soil penetrations are screened by the support contractor for the existence of potential hazards prior to the subcontractor beginning work. In many regards, HAMMER requires extraordinary measures that go beyond current OSHA standards to anticipate potentially hazardous conditions. Examples of these more stringent controls can be found in the area of fall protection, heat stress, cold stress, fire props, and ergonomics.

*Engineering Controls* - Engineering controls are the preferred method for eliminating/minimizing employees, students, and instructors exposure to hazards. Spaces were toured where employee involvement resulted in separation of storage cabinets to maximize employee safety and use of “Scram Switches” on all props.

There have also been considerable resources expended in the area of ergonomics. HAMMER has access to a knowledgeable and trained Industrial Hygienist who conducts routine evaluations of workspaces and occupied areas throughout the HAMMER facility and Hanford Training Center. Ergonomic furniture, keyboards and other computer equipment were evident and in use in many office settings. Work areas where cases of potential ergonomic injury have occurred are evaluated, as well as the entire work section associated with the area of concern. Ergonomic training is performed to all workers for awareness to potential exposures. This training includes a computer-based training program (i.e., ERGO SMART), which allows individuals to set up a workstation according to ergonomic requirements. During the past year every staff member’s workstation was evaluated and the necessary changes made.

*Administrative Controls* - The type of work being conducted at this site does not warrant administrative controls that entail time rotation or other exposure control strategies. There is extensive use of personal protective equipment on the work site. A rigorous program has been developed and followed for the control of heat stress hazards, which anticipates hazardous heat conditions. The program involves utilizing the medical and industrial hygiene staffs in training workers on hazardous heat conditions, the effects and treatments of heat illness, monitoring heat stress levels using known techniques and instrumentation, implementing work/rest regimens known to reduce affects of heat, and medically monitoring workers in potential hazardous high heat level conditions. Heat illness cases have been dramatically reduced as a result this proactive initiative.

### **C. Safety and Health Rules**

Rules have been clearly laid out for all employees and managers. The company employees receive positive reinforcement, as well as discipline when necessary. The ISMS delivers a comprehensive set of requirements and delivers a combination of processes and software tools that provide staff with a wide range of standards, procedures, and guidelines.

ISMS processes, related to worker safety and health establishes the minimum set of rules for work. Senior management has the responsibility to establish and enforce disciplinary policy. Violations of S&H procedures, activities or standards can result in disciplinary action up to and including dismissal. HAMMER had also established several programs to reward exceptional performance, including the Outstanding Performance Award Program and the Outstanding Team Performance Award Program. However, these programs were stopped due major cuts in the funding for HAMMER. HAMMER management and staff are looking at innovative ways for rewards for safety performance.

Overall, the Team found that the S&H rules to be followed by all employees, including subcontractor employees, is well documented. Interviews with employees indicated they knew and understood the disciplinary process should these rules not be adhered to. Those interviewed felt this process was both fair and consistent, and gave examples of positive reinforcement received from supervisors and management for good work practices.

#### **D. Personal Protective Equipment**

Site policy regarding the use of PPE is established in procedures. HAMMER policy states; “The use of personal protective equipment is the last line of defense against workplace hazards and is only used when engineering and administrative controls are not feasible, or as an interim measure while other controls are being implemented” as stated in the HAMMER Personal Protective Clothing and Equipment program. Hazards are usually anticipated, the personal protective equipment necessary for safe completion of a job is supplied by the contractor and, where necessary, for the employees of subcontractors. A variety of equipment is made available including gloves, boots, safety glasses, hearing protection, and respirators. The application indicated that employees must receive training and appropriate medical evaluation before being permitted to use PPE and this was confirmed in the interviews with employees. Training includes information about the maintenance, care, inspection, storage, disposal and use of PPE. Where PPE is utilized, instruction for its use is integrated into task-specific procedures (AJHA, JHA & JSAs). The PPE program is an in-depth program that is well integrated into the operations control, safety and health oversight, and training portions of the site’s programs. HAMMER conducts a Self-Assessment of their Respiratory Protection Program annually as required by ANSI, OSHA, and DOE P 450.5. The evaluations include only non-radiological programs and areas with use in the field. HAMMER has no radiological material at their facility except check sources on radiological monitoring equipment. HAMMER through the HSO has a full time program support. Their program meets or exceeds OSHA and ANSI requirements.

Respirator certification is verified before the respirator is issued and training is provided to the students and before entry into an area requiring the respirator usage, such as confined spaces and props. HAMMER has very few places that require use of respirators, except for the purpose of training. All HAMMER employees interviewed

that might require use of respirators at the site indicated that they were provided all personal protective equipment specified for the job. They also indicated that the HAMMER or HSO company identified the equipment necessary for each job well in advance of its use, provided training to workers on its use, and the reasons for its use. Several workers remarked that they had been so sold on the use of PPE during employment at this site, that they found themselves using PPE at home on jobs they had not previously used it on, such as grinding and lawn trimming. This information clearly confirms that a “cultural” change is occurring among the employees at this site. Very few respirators are being used in the HAMMER operations. All respirators used at Fluor Hanford, HSO, and HAMMER is NIOSH approved. A private contractor near the Hanford site cleans respirators.

### **E. Preventive/Predictive Maintenance**

HAMMER has implemented a comprehensive PM program. PM is used to mitigate the chances and effects of unplanned equipment failure, thereby enhancing safe and effective operations. HAMMER uses a combination of preventive, and corrective maintenance to enhance the availability, operability, and reliability of facility structures, systems and components. Employees can initiate work orders for maintenance more frequently than established intervals. PM systems are computerized, facilitating scheduling, tracking and trending.

PM schedules are based on manufacturer's recommendations, operating experience, surveillance requirements, federal and state laws, and good engineering practices and industry codes. Integrated team planning and job site walk-downs are used to plan PM work orders. These teams consist of craft personnel, safety and health professionals, planners, and engineers. They identify and mitigate safety issues and develop a work document that contributes to safe, efficient work. Work packages are reviewed and approved by a responsible manager. Every employee has the responsibility and authority to stop any work and request additional work scope and job site reviews to improve work processes or to mitigate safety and environmental risks. Management has an aggressive program to resolve these employee-generated concerns promptly. The program also includes provisions to communicate the resolution back to the employee. Recently a HAMMER clerk observed a worker cutting the grass without hearing protection. She stopped the work and had the worker put earplugs on.

Each preventive maintenance action is scheduled at appropriate intervals and, as possible, combined with corrective maintenance activities on the same equipment and with other related maintenance, based on equipment similarity and proximity.

## **F. Emergency Preparedness and Response**

The application describes a mature emergency preparedness program using the supporting infrastructure of the Hanford Site. They practice scenarios (drills and exercises), have coordinated exercises with offsite agencies, and maintain a comprehensive response plan. The site has adopted the incident Command System as the model for managing emergency response on the site. The site's facilities, personnel, procedures and systems meet and/or exceed all requirements of DOE Order 151.1, Comprehensive Emergency Management System.

The Emergency Preparedness (EP) Management System is established. The primary function is to maintain the infrastructure and serve as a resource to line management for emergency preparedness activities. The emergency preparedness process is accomplished through training, continual oversight, policy and procedural development, and guidance in order to provide for the coordination and direction of planning, preparedness, and response to emergency conditions and/or off-normal events where the potential exists for personal injury, damage to facilities or equipment, release of toxic or hazardous materials, impact to projects or programs, and/or security events HAMMER is part of the overall Hanford Site Emergency Preparedness Program. Reviews are also conducted monthly, quarterly, and annually.

Employees interviewed were aware of emergency procedures, and effectively explained evacuation processes. HAMMER has several means to communicate emergency conditions, including; alert phones, sirens, computers, intercoms, of-site radios, etc. Weather emergencies are also communicated to employees. Additionally, VPP Team members were briefed on site emergency procedures, and, although escorted during the VPP review, received orientation to site alarms, postings, and various HAMMER hazards.

HAMMER also uses the services of the Hanford Site Uniform Dose Assessment Center for DOE. HAMMER conducts their own drills and is involved in a joint drill with DOE and other onsite contractors. These drills are to ensure developed/deployed emergency and evacuation plans, as well as contingency plans function properly. Recent evidence of the program was during the steps taken during the CY2001 range fire that burned up to the HAMMER boundaries.

## **G. Radiation Protection Program**

HAMMER has no radiological work within its work areas. They only do the Radiation Worker Level II training and I.

HAMMER does maintain the highest standards of environmental, safety and health protection possible for their work force, contracted work, and students.

## H. Medical Programs

HAMMER has integrated medical services with ES&H. Personnel are served by the DOE contract with the Hanford Environmental Health Foundation (HEHF) for performance of the annual medical surveillance, audiometric exams, and pulmonary function testing. In addition to the DOE Contracted services, Hammer has contracted medical services, first aid, and case management of return to work of employees HEHF. There are three satellite dispensaries and two (2) major clinics at this site. One major clinic is located in North Richland. One physician, in addition to the other medical staff, provides the necessary medical evaluations supported by the rest of the medical staff. Medical staff is involved in hazard analysis, early recognition, and treatment. Walk-around observations often include medical staff so that they can get a first hand understanding of work place exposures.

As an example, medical programs include:

- Hearing Conservation
- Asbestos
- Ergonomics
- Lead Respiratory
- Strains/Sprains
- Hazardous Waste Operation and Emergency Response (HAZWOPER)
- Beryllium
- Wellness

HAMMER utilizes the Employee Job Task Analysis (EJTA) system. This Hanford-wide system is used to match work related hazards that require medical evaluation and essential job functions. Medical exams are then scheduled with notification to the employee and their supervisor. The Team found these combined systems to be unique, and extremely efficient.

Emergency transportation is provided by the Hanford Fire Department (HFD), which is managed by Fluor Hanford under HSO. Multiple paramedics around the clock for full advanced cardiac life support ambulance service, as well as a full battalion force fire department for fire response, industrial rescue, and haz/mat/rad response staff the HFD. Medical protocols are based on the county medical protocols system, and approved by contract with an emergency medical director.

As part of the Medical Program, a monitoring and industrial exposure potential program has been developed for entire Hanford Site, including HAMMER this program is called the EJTA. The overall goal of this program is the successful identification of employees work process; exposure potential, and medical review(s) needs are identified. HEHF provides this service for all Hanford contractors and sub-contractors for their employees. The EJTA requires an annual review between the supervisor and the employee. This review includes site visitors; contract employees that are identified to require an EJTA.

HAMMER has conducted and is current on greater than 99% of their identified workforce.

## **I. Conclusion**

The Team believes the FH HAMMER/Training has in place an adequate program of hazard prevention and control.





## VII. Safety and Health Training

The safety and health training program, procedures and overall implementation meets or exceeds the DOE-VPP criteria.

Overall, the site provides formal, comprehensive, and documented safety and health training for all employees, supervisors and managers. The Safety and Health Training subject area, Training and Qualification for Staff, describes training and qualification considerations for HAMMER staff members and onsite non-staff. The subject area establishes required procedures and suggested guidelines for identifying, planning, and completing training. It is intended to include all training considered to have an affect on the performance of work that presents a possible risk or consequence to HAMMER staff, facilities, students, or business. The immediate manager, training coordinator, and/or staff member identifies the staff member's training and qualification needs by:

- Developing a training plan for all staff and managers within 30 days of hiring, and at least annually thereafter. Efforts are always underway to upgrade the Training Programs at HAMMER.
- Assigning any additional training and qualification activities when needed to address local, organizational, project-, or job-specific needs. These training and qualification assignments are made whenever needed to support work.

Two levels of hazard training were available for the HAMMER staff. First is for passive user, those who may be in the proximity, but not work with the hazard. The second is for the active user, those who are directly exposed to the hazard. A passive user may need access to a facility to obtain equipment, while the active user may be in the same room or facility, but be performing work different work. The active user can perform maintenance type work or be assigned to overview an Instructor when using one of the many props.

Most hazards-related training courses provide information about how to recognize hazards as well as mitigate them. Lesson plans are available for each course, and a rigorous process of development, approval, periodic review, and student evaluation ensures a high level of quality and continuous improvement in the training process and the facilities/props at HAMMER.

Computer-based training provides many courses, to the HAMMER staff although testing and practical examination to demonstrate proficiency is used when appropriate or required, such as” HGET or GERT. Classroom training is the preferred type. HAMMER is generally a hands-on type of training facility. Training is their mission and principle function. They have adopted the motto, “As real as it gets.”

Informal training methods used at the site includes”: safety meetings, informal “tailgate” or “toolbox” sessions, and oral briefings by supervisors or managers. Other informal methods include various publications such as pamphlets, fliers, memos and alerts that are available in both hardcopy and in electronic format. It was suggested that for routine work that could have hazards, that periodic informal “tailgate/toolbox” safety meetings and job planning be conducted.

Overall, it was apparent during this review that sufficient safety and health related knowledge, skills, and abilities are evident in the workforce. HAMMER has a comprehensive method for ensuring that necessary training is identified for each employee in a Job Requirements Review, and that required training is reflected in Employee Training Plans and on the annual performance appraisals. All employees interviewed indicated that they understood the training requirements related to their jobs, and indicated that if they felt identified requirements were not applicable. Staff are encouraged and informed that they have a mechanism within at the HAMMER facility to challenge any of the requirements.

The HAMMER facility specific training has allowed greater flexibility for teaching students; new staff, current staff, or visiting students to conduct their work do it in a safer manner. It was noted that the training can be made available on the road, but because of the uniqueness of the facility it is almost always conducted on site. Students come from all over the world to receive the “hands on training.”

The Team is satisfied that FH HAMMER/Training has established sufficient program content and direction for an adequate safety and health training program.

## **VIII. Conclusion**

The Team was able to reach a consensus that the applicant meets or exceeds all technical requirements for participation in the DOE-VPP as a STAR site. Accordingly, the Team now forwards this report as formal documentation of their conclusion to senior management for their consideration in granting DOE-VPP STAR recognition to FH HAMMER/Training.



## Appendix: DOE-VPP Onsite Review Team for HAMMER/Hanford Training Site

NAME	ORGANIZATION
Roy Gibbs	Team Leader, DOE HQ EH- 51
Rex Bowser	Assistant Team Leader, DOE HQ EH-51
Arlene Bergman	Safety Representative, Fluor Analytical Services

